01.04 - STRUCTURES
INDEX OF DRAWINGS

DRAWING NUMBER	DRAWING TITLE
S-001	INDEX OF DRAWINGS
S-002	BRIDGE DECK JOINTS PLAN AND INFORMATION CHART
S-003	ASPHALTIC PLUG JOINT DETAILS
S-004	PARAPET JOINT DETAILS

MILE POINT	BRIDGE NO.	CROSSING	TOWN
17.22	02352	ROUTE 11 SOUTH BOUND OVER SR 637(LAKE HAYWARD ROAD)	COLCHESTER
17.24	02353	ROUTE 11 NORTH BOUND OVER SR 637(LAKE HAYWARD ROAD)	COLCHESTER

NOTE : FOR BRIDGE LOCATIONS, SEE HIGHWAY PLANS.

THE DESIGN APPEARS TO CONFORM TO APPLICABLE CRITERIA. APPROVAL IS NOT TO BE CONSTRUED TO MEAN THAT ALL ASPECTS OF THE DESIGN HAVE BEEN PERSONALLY CHECKED BY THE UNDERSIGNED.

Rabih M. Barakat P.E.
2014.08.12
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TRANSPORTATION PRINCIPAL ENGINEER

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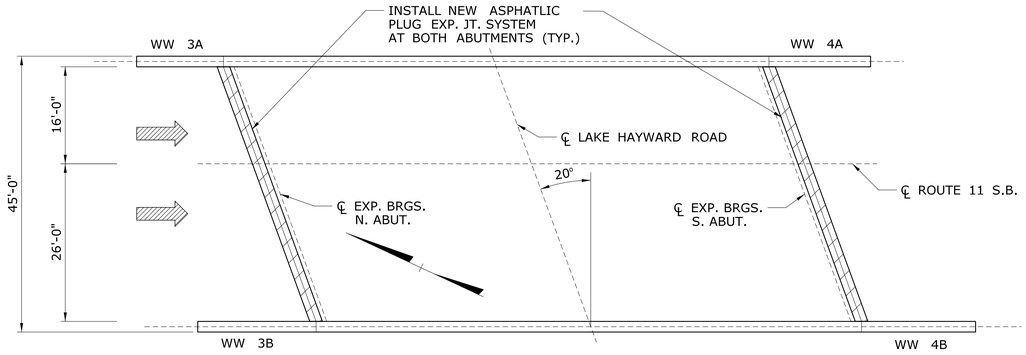
PROJECT TITLE:
PAVEMENT PRESERVATION ON ROUTE 11

TOWN: COLCHESTER
DRAWING TITLE: STRUCTURES INDEX OF DRAWINGS

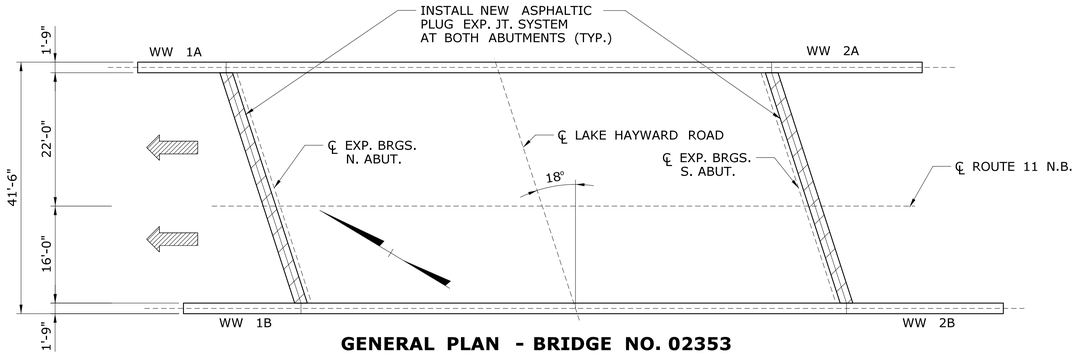
PROJECT NO. 28-201
DRAWING NO. S-01
SHEET NO. 01.04.01

Connecticut Department of Transportation
QA/QC Format Check



GENERAL PLAN - BRIDGE NO. 02352
ROUTE 11 OVER SR 637(LAKE HAYWARD ROAD)

NOT TO SCALE



GENERAL PLAN - BRIDGE NO. 02353
ROUTE 11 OVER SR 637(LAKE HAYWARD ROAD)

NOT TO SCALE

BRIDGE INFORMATION FOR REPLACEMENT OF EXISTING EXPANSION JOINTS

		BRIDGE NO.	
		02352	02353
		S.B.	N.B.
BRIDGE GEOMETRY AND DATA	MILE POINT	17.22	17.24
	NUMBER OF TRAVEL LANES	2	2
	CURB - CURB WIDTH (FT)	42.2'	38'
	MAXIMUM THERMAL MOVEMENT (IN)	6/7"	6/7"
	SKEW (DEG)	20°	18°
MILLING AND PAVING DEPTH	MILLING OF HMA (0" TO 4") DEPTH	1"	1"
	PMA S0.5, DEPTH	2"	2"
DECK JOINT TYPE AND ESTIMATED QUANTITY	ASPHALTIC PLUG EXPANSION JOINT SYSTEM QUANTITY (C.F.)	67	61
JOINT REPLACEMENT DETAIL	NORTH ABUTMENT	DETAIL A	DETAIL A
	SOUTH ABUTMENT	DETAIL A	DETAIL A
	PARAPET	DETAIL B	DETAIL B

DETAIL A IS ON DRAWING NO. S-03
DETAIL B IS ON DRAWING NO. S-04

ASPHALTIC PLUG EXPANSION JOINT SYSTEM NOTES

1. NO BRIDGING PLATE SHALL BE USED AT THE FOLLOWING LOCATIONS:
   A. JOINT BETWEEN A DECK END AND A CONCRETE APPROACH PAVEMENT
   B. WHERE A BRIDGE DECK END MEETS A BITUMINOUS APPROACH PAVEMENT
2. SAW-CUTS MADE 3' EACH SIDE OF CENTERLINE OF JOINT WILL BE PAID AS "CUT BITUMINOUS CONCRETE PAVEMENT".
3. THE REMOVAL OF ALL EXISTING JOINT SYSTEMS AND BITUMINOUS CONCRETE WITHIN THE LIMITS SHOWN TO BE INCLUDED FOR PAYMENT UNDER THE ITEM "REMOVAL OF HMA WEARING SURFACE".
4. INSTALLATION OF MEMBRANE WITHIN THE LIMITS SHOWN TO BE PAID UNDER THE ITEM, "MEMBRANE WATERPROOFING (SHEET) (TORCH APPLIED)"
5. CRACK SEALANT PLACED ALONG VERTICAL FACES OF THE SAW-CUT PAVEMENT TO BE PAID UNDER THE ITEM, "JOINT AND CRACK SEALING OF BITUMINOUS CONCRETE PAVEMENT".
6. THE FURNISHING AND PLACING OF PMA S0.5 TO BE INCLUDED FOR PAYMENT UNDER THE ITEM "PMA S0.5".
7. SAW-CUTTING AND REMOVAL OF PAVEMENT FOR JOINT INSTALLATION TO BE INCLUDED FOR PAYMENT UNDER THE ITEM, "ASPHALTIC PLUG EXPANSION JOINT SYSTEM".
8. CLOSED CELL BACKER ROD DIAMETER SHALL BE DETERMINED AFTER MEASURING THE JOINT OPENING. THE ROD SHALL BE 25% LARGER THAN THE JOINT OPENING.
9. ASPHALTIC PLUG EXPANSION JOINT SYSTEMS MAY BE INSTALLED ONLY WITHIN THE TEMPERATURE RANGE SPECIFIED IN THE SPECIAL PROVISION "ASPHALTIC PLUG EXPANSION JOINT SYSTEM". REFERENCE TABLE D FOR "BRIDGE SUPERSTRUCTURE SURFACE TEMPERATURE" RANGE IN THE SPECIAL PROVISION
10. EXPLORATION OF PAVEMENT THICKNESS AND JOINT LOCATION TO BE INCLUDED IN THE GENERAL COST OF THE ITEM "REMOVAL OF HMA WEARING SURFACE".

QUANTITIES

ITEM	UNIT	TOTAL AMOUNT	AMOUNT #02352 (SB)	AMOUNT #02353 (NB)
ASPHALTIC PLUG EXPANSION JOINT SYSTEM	C.F.	130	67	63
REMOVAL OF HMA WEARING SURFACE	S.Y.	108	57	51
CUT BITUMINOUS CONCRETE PAVEMENT	L.F.	173	91	82
MEMBRANE WATERPROOFING (SHEET) (TORCH-APPLIED)	S.Y.	41	22	19
JOINT AND CRACK SEALING OF BITUMINOUS CONCRETE PAVEMENT	L.F.	161	85	76
PMA S0.5	TON	19	10	9

PAVEMENT REPLACEMENT AT ASPHALTIC PLUG JOINTS (APJ):

1. THE REQUIREMENTS OF SPECIAL PROVISION SECTION 4.06 SHALL BE MET EXCEPT IN LIEU OF DENSITY TESTING, THE METHODS DESCRIBED BELOW SHALL BE FOLLOWED TO ASSURE PROPER COMPACTION.
2. TOP LIFT MUST BE UNIFORM THICKNESS; INTERMEDIATE LIFTS CAN BE PLACED AT 1 1/4" TO 2 1/2" COMPACTED.
3. REQUIREMENTS FOR PROPER COMPACTION:
   a. MINIMUM 265° F DELIVERY TEMPERATURE OF MATERIAL. PLACE AND SPREAD MATERIAL BEFORE IT COOLS TO 260° F. MATERIAL NOT PLACED BEFORE FALLING BELOW TEMPERATURE REQUIREMENT WILL BE REJECTED.
   b. COMPACT NON-SURFACE LIFTS WITH VIBRATORY PLATE COMPACTOR MEETING THE FOLLOWING REQUIREMENTS:
      i. SHALL BE DESIGNED TO COMPACT BITUMINOUS CONCRETE
      ii. SHALL BE EQUIPPED WITH A WATER TANK
      iii. MINIMUM CENTRIFUGAL FORCE OF 3200 LBS
      iv. MAXIMUM CENTRIFUGAL FORCE OF 6000 LBS
      v. WEIGH A MINIMUM OF 160 LBS (WITHOUT WATER)
      vi. MINIMUM 4400 VIBRATIONS PER MINUTE
   c. COMPACT TOP LIFT WITH 3 1/2 TO 4 1/2 TON DOUBLE DRUM ROLLER, DESIGNED TO COMPACT BITUMINOUS CONCRETE.
   d. PROVIDE NUMBER OF PASSES BASED ON LIFT THICKNESS AS FOLLOWS:

LIFT THICKNESS (INCHES)	NUMBER OF PASSES
1 1/4 TO 1 1/2	8
1 1 /2 TO 2	10
2 TO 2 1/2	12

   e. ADDITIONAL COMPACTION EQUIPMENT MAY BE REQUIRED TO COMPLETE LIFT COMPACTION BEFORE MATERIAL COOLS TO 180° F.
   f. CORNERS OR OTHER AREAS INACCESSIBLE TO PLATE TAMPER SHALL BE COMPACTED WITH A HAND TAMPER (APPROVED FOR USE BY THE ENGINEER) A MINIMUM OF 20 TIMES BEFORE MATERIAL COOLS TO 180° F.
4. THE CONTRACTOR MAY REQUEST TO USE ALTERNATE EQUIPMENT BY SUBMITTING A SUPPLEMENT TO THEIR QC PLAN. THE EQUIPMENT AND PROCEDURES MUST BE APPROVED BY THE ENGINEER PRIOR TO USE.
5. IF THESE METHODS ARE NOT PERFORMED TO THE SATISFACTION OF THE ENGINEER, DENSITY VERIFICATION MAY BE REQUIRED WHEREIN THE CONTRACTOR SHALL PROVIDE DENSITY TESTING WITH A QC NUCLEAR DENSITY GAUGE OR COLLECT CORE SAMPLES AS SPECIFIED IN SECTION 4.06.

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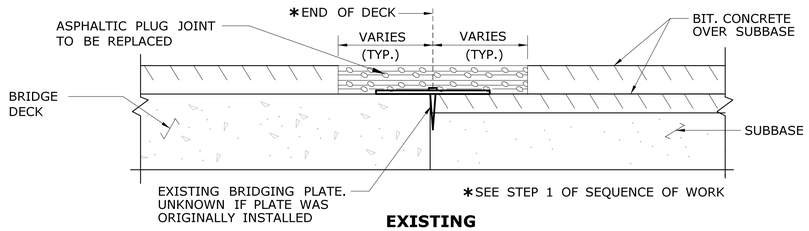
PROJECT TITLE:
PAVEMENT PRESERVATION ON ROUTE 11

TOWN: **COLCHESTER**
DRAWING TITLE: **BRIDGE DECK JOINTS PLAN AND INFORMATION CHART**

PROJECT NO. **28-201**
DRAWING NO. **S-02**
SHEET NO. **01.04.02**



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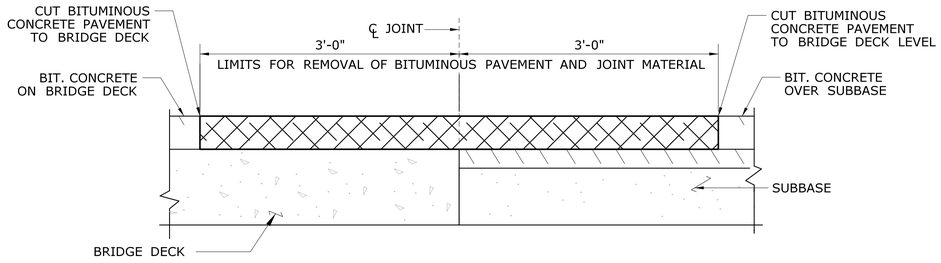
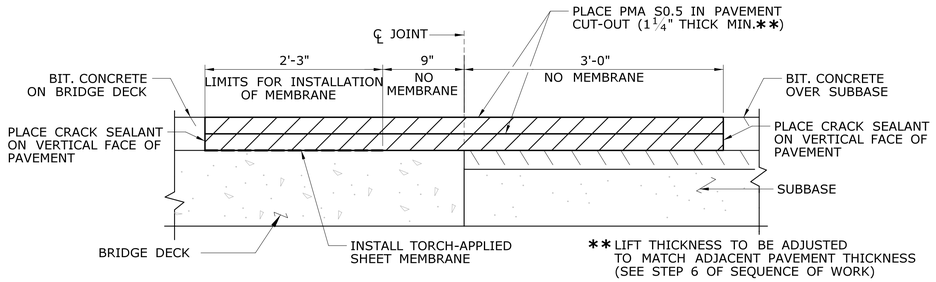
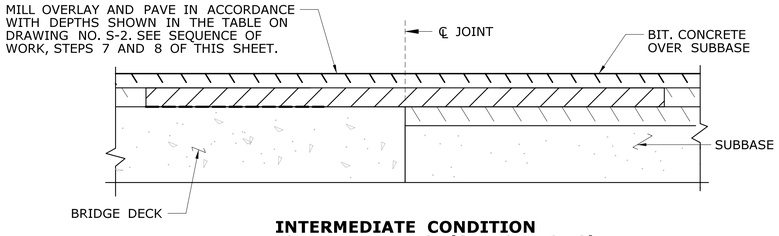


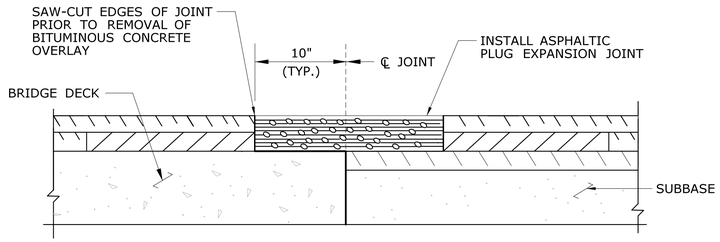
INTERMEDIATE CONDITION
JOINT AND PAVEMENT REMOVAL (STEPS 1-3)



INTERMEDIATE CONDITION
PLACEMENT OF PAVEMENT IN JOINT CUTOUT (STEPS 4-6)



INTERMEDIATE CONDITION
MILLING AND PAVING (STEPS 7 & 8)



FINAL CONDITION (STEPS 9 & 10)

SEQUENCE OF WORK

STEP 1: CONTRACTOR SHALL PERFORM AN EXPLORATION AT THE ROADWAY CENTERLINE TO DETERMINE THE DEPTH OF PAVEMENT AND THE LOCATION OF THE DECK END (CENTERLINE OF PROPOSED JOINT) BEFORE PROCEEDING TO STEP 2.

STEP 2: SAW-CUT BITUMINOUS PAVEMENT ON BOTH SIDES OF EXISTING JOINT FOR PAVEMENT CUT-OUT. EACH SAW CUT LINE SHALL BE 3' FROM THE CENTERLINE OF THE EXISTING JOINT. SAW-CUT SHALL NOT DAMAGE EXISTING DECK.

STEP 3: REMOVE EXISTING PAVEMENT MATERIAL AND JOINT MATERIAL WITHIN THE LIMITS SHOWN.

STEP 4: INSTALL MEMBRANE TO THE TOP OF DECK WITHIN THE LIMITS SHOWN.

STEP 5: PLACE CRACK SEALANT ON VERTICAL EDGE OF PAVEMENT ALONG SAW-CUT LINES.

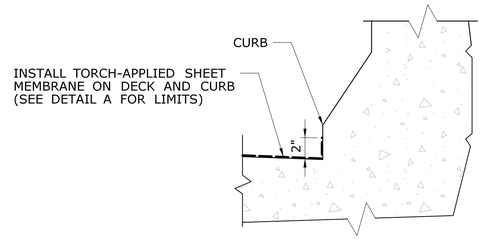
STEP 6: PLACE PMA S0.5 IN THE JOINT CUTOUT. REFER TO SHEET S-02 FOR THE REQUIREMENTS OF PAVEMENT REPLACEMENT AT ASPHALTIC PLUG JOINTS (APJ).

STEP 7: MILL ROADWAY AND BRIDGE PAVEMENT TO SPECIFIED DEPTHS.

STEP 8: PAVE TOP COURSE ON ROADWAY AND BRIDGE.

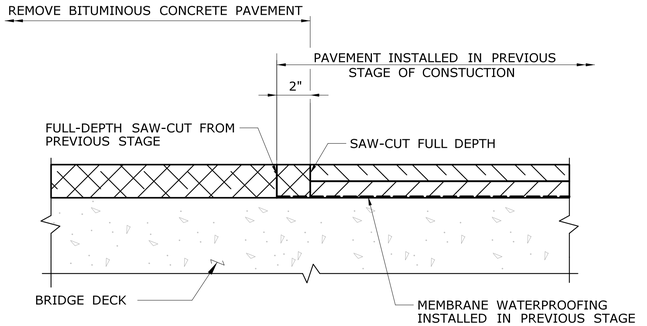
STEP 9: CUT PAVEMENT FULL DEPTH, 10" EACH SIDE OF CENTER OF JOINT, AND REMOVE ALL PAVEMENT MATERIAL BETWEEN SAW-CUTS.

STEP 10: INSTALL PROPOSED ASPHALTIC PLUG EXPANSION JOINT SYSTEM.



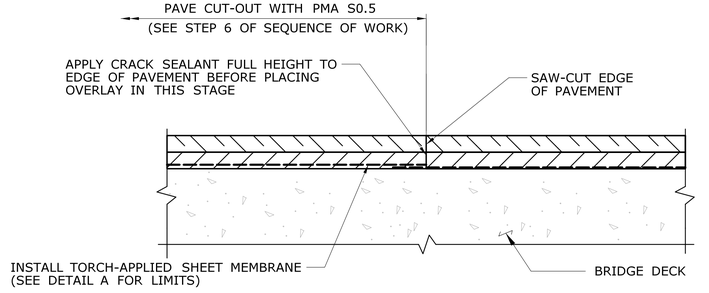
SECTION AT GUTTERLINE AT PAVEMENT CUT OUT

N.T.S.



SECTION - INITIAL LONGITUDINAL STAGE CONSTRUCTION JOINT IN PAVEMENT CUTOUT

N.T.S.



SECTION - FINAL LONGITUDINAL STAGE CONSTRUCTION JOINT IN PAVEMENT CUTOUT

N.T.S.

DETAIL A - PROPOSED ASPHALTIC PLUG JOINT WITHOUT BRIDGING PLATE

N.T.S.

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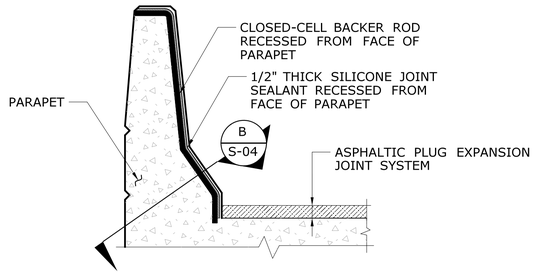
PROJECT TITLE: PAVEMENT PRESERVATION ON ROUTE 11

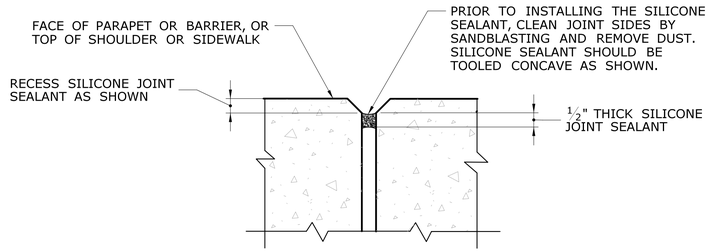
TOWN: COLCHESTER
DRAWING TITLE: ASPHALTIC PLUG JOINT DETAILS

PROJECT NO. 28-201
DRAWING NO. S-03
SHEET NO. 01.04.03



JOINT TREATMENT AT PARAPET

NOT TO SCALE



SECTION THROUGH PARAPET — B / S-04

NOT TO SCALE

SILICONE JOINT SEALANT AND BACKER ROD DETAILS

NOTE:

PRIOR TO INSTALLING THE NEW BACKER ROD AND SILICONE JOINT SEALANT, REMOVE EXISTING JOINT MATERIAL. CLEAN JOINT SIDES BY SANDBLASTING. DUST SHALL BE REMOVED BY THE METHOD APPROVED BY THE ENGINEER. THIS WORK WILL BE PAID FOR UNDER THE ITEM "ASPHALTIC PLUG EXPANSION JOINT SYSTEM".

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TOWN: COLCHESTER

DRAWING TITLE: PARAPET JOINT DETAILS

PROJECT NO. 28-201

DRAWING NO. S-04

SHEET NO. 01.04.04